IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Original): A high sensitivity receiver comprising

reception bandpass filter means for receiving a radio frequency signal as an input and for passing a signal in a desired frequency band;

a low noise reception amplifier for providing low noise amplification of an output signal from the reception bandpass filter means to a desired level;

a laser diode for converting an output signal from the low noise reception amplifier to an optical signal to be delivered;

a heat shielding box for confining the reception bandpass filter means, the low noise reception amplifier and the laser diode therein;

and a cooling means for cooling the interior of the heat shielding box.

Claim 2 (Original): A high sensitivity receiver according to Claim 1, in which the reception bandpass filter means, the low noise reception amplifier and the laser diode are divided into s groups and the cooling means includes s cooling units each cooling one of the groups where s is one of 1, 2 or 3.

Claim 3 (Currently Amended): A high sensitivity receiver according to Claim 1, further comprising

an array antenna formed by n antenna elements where n is an integer equal to or greater than 2;

and a phase shifter synthesizer for receiving received signals from the n antenna elements, adjusting phase differences between the received signals and synthesizing them to

deliver a synthesized output as said radio frequency signal to said reception bandpass filter means.

Claim 4 (Original): A high sensitivity receiver according to Claim 3 in which the phase shifter synthesizer is disposed within the heat shielding box to be cooled.

Claim 5 (Original): A high sensitivity receiver according to Claim 1, further comprising

an array antenna formed by n antenna elements where n is an integer equal to and greater than 2;

and a phase shifter for receiving received signals from the n antenna elements as inputs and for adjusting phase differences between the received signals to deliver n signals;

said radio frequency signal being n output signals from the phase shifter, which are input to the reception bandpass filter means which comprises n filters for passing signals in desired frequency bands;

said low noise reception amplifier including n amplifiers, into which the n filter output signals are input respectively;

and a synthesizer for synthesizing output signals from the n amplifiers to provide an input to the laser diode;

the phase shifter and the synthesizer being disposed within the heat shielding box to be cooled.

Claim 6 (Original): A high sensitivity receiver according to Claim 5 in which the reception phase shifter, the reception bandpass filter means, the low noise reception

amplifier, the synthesizer and the laser diode are divided into s groups and the cooling means includes s cooling units each cooling one of the groups where s is one of 1, 2, 3, 4 or 5.

Claim 7 (Original): A high sensitivity receiver according to Claim 1, further comprising

an array antenna formed by n antenna elements where n is an integer equal to or greater than 2;

said radio frequency signal being signals received by the n antenna elements, the reception bandpass filter means comprising n filters each receiving a radio frequency signal received by one of n antenna elements for passing a signal in a desired frequency band, the low noise reception amplifier including n amplifiers, to which outputs from the n filters are fed;

and a phase shifter synthesizer for receiving output signals from the n amplifiers as inputs and for adjusting phase differences between these output signals and for synthesizing the output signals to be input to the laser diode.

Claim 8 (Original): A high sensitivity receiver according to Claim 7 in which the reception bandpass filter means, the low noise reception amplifier, the phase shifter synthesizer and the laser diode are divided into s groups and the cooling means includes s cooling units each cooling one of the groups where s is one of 1, 2, 3 or 4.

Claim 9 (Original): A high sensitivity receiver according to Claim 1 in which the cooling means includes a cooling unit formed by a cooling plate and at least one other cooling unit formed by a cooling plate in combination with a heat resistance member for

cooling one or more of the reception bandpass filter means, the low noise amplifier and the laser diode to mutually different temperatures.

Claim 10 (Original): A high sensitivity receiver according to Claim 1 in which said cooling means includes a plurality of cooling means, each of which cools one or two of the reception bandpass filter means, the low noise reception amplifier and the laser diode to mutually different temperatures.

Claim 11 (Currently Amended): A high sensitivity receiver according to Claim 1 in which said cooling means includes a plurality of cooling ~~unit~~ units each formed by a cooling member, each of which cools one or more of the reception bandpass filter means, the low noise reception amplifier and the laser diode to mutually different temperatures.

Claim 12 (Original): A high sensitivity receiver according to Claim 1, further comprising

a power distributor connected between the low noise reception amplifier and the laser diode for branching part of the signal which is input to the laser diode;

and a bias current control means for controlling a bias current supplied to the laser diode in accordance with the power level of the signal which is branched by the power distributor.

Claim 13 (Original): A high sensitivity receiver according to Claim 1, further comprising

a pilot signal generator preceding the laser diode for generating a pilot signal which is to be added to said radio frequency signal;

an optical/electrical transducer for transducing the optical signal into an electric signal;

a branching filter for selecting the pilot signal from an electrical output signal from the optical/electrical transducer;

a level detector for detecting the level of the pilot signal which is filtered by the branching filter;

and a monitor for comparing the level of the detected pilot signal against a preset threshold to detect the occurrence of a fault in at least the laser diode.